#Puppet code to install and configure Jenkins on CentOS 9

```puppet
class jenkins {

 # ----------------------------
 # Jenkins repository
 # ----------------------------
 yumrepo { 'jenkins':
   baseurl  => 'https://pkg.jenkins.io/redhat-stable',
   descr    => 'Jenkins Stable Repo',
   enabled  => 1,
   gpgcheck => 1,
   gpgkey   => 'https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key',
 }

 # ----------------------------
 # Adoptium repository
 # ----------------------------
 yumrepo { 'adoptium':
   baseurl  => 'https://packages.adoptium.net/artifactory/rpm/rhel/$releasever/$basearch',
   descr    => 'Adoptium',
   enabled  => 1,
   gpgcheck => 1,
   gpgkey   => 'https://packages.adoptium.net/artifactory/api/gpg/key/public',
 }

 # ----------------------------
 # Required packages
 # ----------------------------
 package { ['fontconfig', 'java-21-openjdk']:
   ensure => present,
 }

 package { 'jenkins':
   ensure  => present,
   require => Yumrepo['jenkins'],
 }
```

```
# ----------------------------
# systemd override directory
# ----------------------------
file { '/etc/systemd/system/jenkins.service.d':
  ensure => directory,
  mode   => '0755',
}

# ----------------------------
# Jenkins port configuration
# ----------------------------
file { '/etc/systemd/system/jenkins.service.d/override.conf':
  ensure  => file,
  mode    => '0644',
  content => "[Service]\nEnvironment=\"JENKINS_PORT=8000\"\n",
  notify  => Exec['systemd-daemon-reload'],
}

# ----------------------------
# Reload systemd
# ----------------------------
exec { 'systemd-daemon-reload':
  command    => '/bin/systemctl daemon-reload',
  refreshonly => true,
}

# ----------------------------
# Jenkins service
# ----------------------------
service { 'jenkins':
  ensure => running,
  enable => true,
}

# ----------------------------
# Firewall rule
# ----------------------------
exec { 'open-jenkins-port':
```

```puppet
    command => '/usr/bin/firewall-cmd --permanent --add-port=8000/tcp',
    unless  => '/usr/bin/firewall-cmd --list-ports | grep -q 8000/tcp',
    notify  => Exec['firewalld-reload'],
  }

  exec { 'firewalld-reload':
    command    => '/usr/bin/firewall-cmd --reload',
    refreshonly => true,
  }

}
```